

The Greenbank logo, featuring a stylized 'G' icon followed by the word 'Greenbank' in a white, sans-serif font. The background of the entire page is a close-up, high-angle photograph of water with intricate, shimmering ripples and reflections, creating a textured, blue-toned surface.

Greenbank

Greenbank Review

Water under pressure

Our 27th Annual Investor Day 2024

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Welcome to the Investor Day 2024 edition of the Greenbank Review

2024 is a milestone for Greenbank – 20 years ago this year we were formally established as Rathbone Greenbank Investments, though the history of our work in ethical and sustainable investment goes back to the nineties when the original Greenbank team members – some of whom still work in Greenbank today – developed one of the UK’s first tailored ethical portfolio services.



John David
Head of Greenbank

Over the years, the team has expanded to over 70 members across five offices, and we have an enviable breadth of expertise allowing us to deliver a range of investment services for private clients, charities and trusts, all focussed on sustainability. We work hard for our clients and are proud of the service we provide, and we were delighted to win the award for ‘the Best Sustainable Investment Wealth Manager’ at the 2023 Investment Week Sustainable Investment Awards.

Our investment proposition continues to evolve. It is refined around the eight sustainable development themes underpinning our portfolios and is supported by our programme of stewardship and engagement work which aims to drive positive change in business and society.

And sadly, I think we can all accept that change is needed. In the most recent report on Global Risks the World Economic Forum listed five of the top ten ten year risks, as being environmentally related (extreme weather events and biodiversity loss for example). Others, such as involuntary migration are to a large extent environmentally related.

Of course social and environmental risks are often closely intertwined and, as an example, in March 2023 the United Nations warned of a looming global water crisis and an “imminent risk” of shortages due to overconsumption, pollution and climate change.

At our Investor Day, with our focus on water, we looked at these risks but also the potential for business and the investors who support them to offer solutions to these challenges. With challenge comes opportunity and at Greenbank our goal is to deliver sustainable returns in all senses. I hope you enjoy reading this record of the day – and that you might join us at future events.

The value of investments and the income from them may go down as well as up and you may not get back what you originally invested.

The information in this document is correct at July 2024 and is not intended as an offer or solicitation for the purchase or sale of any financial instrument.

Claire Elsdon

Director of Capital Markets

CDP

Claire leads the Capital Markets team at CDP, the non-profit that runs the world's environmental disclosure system. She defines engagement strategy with financial institutions and other capital markets actors including institutional investors, banks, insurers and private equity and debt houses on a global basis, enabling them to request, utilise and apply critical climate, water and forest impact data from the companies they finance.

Claire led CDP's role in delivering disclosure solutions for the Bank of England's Critical National Infrastructure Banking Supervision and Evaluation Testing (CBEST) exercise and has spearheaded CDP's highly innovative sustainable supplier financing solution, most recently culminating in the Vodafone/ Citi collaboration. Claire is also passionate about the need for Taskforce on Climate-Related Financial Disclosures (TCFD) aligned disclosure amongst small and medium-sized enterprises (SMEs) and is championing the first SME disclosure exercise for banks and 'anchor' buyers this year.

Prior to CDP, Claire worked for over a decade broking pan-European equities to UK based institutional investors at HSBC, Merrill Lynch and JP Morgan before moving to Tanzania to establish Africa's leading social enterprise focussing on community motorcycle safety solutions.



Nothing related to climate change happens in isolation. Though CDP began as a carbon disclosure project, it has evolved to record and analyse data from a range of interdependent factors influencing planetary change, including water. It operates under the guiding principle that what isn't measured can't be managed. By asking companies how their operations are impacting the planet - or conversely, how the planet is affecting their operations - CDP achieves a broader understanding of risks and opportunities and provides greater clarity for asset owners and managers investing in businesses adapting to the climate crisis.

Last year, average global temperatures were at least 1.5C higher than pre-industrial levels for a record number of days. This has exacerbated problems in the hydrological cycle - the continuous circulation of water from the ground to the atmosphere and back - resulting in prolonged droughts on the one hand and severe and more frequent flooding on the other. At the same time, CDP saw almost 5,000 companies report on water-related impacts, roughly a quarter of all companies responding to CDP's climate questionnaire.

In March, CDP published its Stewardship at the Source report which looked at how companies manage water procurement and consumption across supply chains. This was previously overlooked as an area of water-related risk as much of the historical thinking focused on stranded assets or the impacts of flooding on direct operations. Recent events have shown that supply chain risks are complex and far-reaching. While parts of the Rhine were closed to shipping in 2023 due to heavy rains, the Panama Canal grappled with severe drought. Flooding halted industrial production in Japan while water scarcity in Taiwan disrupted the supply of the semiconductors underpinning the global digital economy.

The world's reliance on semiconductors directly influences national GDP and individual wealth. However, the increasing complexity and capacity of microchips puts more pressure on water in the production cycle which in turn threatens long-term economic goals - technology may yet save the world, but it is a very thirsty sector. The good news is that more companies are focusing on trade routes and their wider water dependencies to gauge the long-term resiliency of their production methods and supply chains.

CDP's stewardship report showed that 50% of the water footprint (the volume of freshwater needed to produce goods and services) of high-income economies is from areas of the Global South facing extreme water insecurity. Compounding that risk is the fact that water as a commodity is fundamentally mispriced. Companies are nevertheless learning the value of supply chain risk and impact assessments - 40% of last year's disclosures to CDP provided information on supply chain risk while 25% included water impact assessments. New reporting initiatives like the Taskforce on Nature-related Financial Disclosures (TNFD) and Science Based Targets for Nature (SBTN) are also helping companies to navigate a complex and nuanced field.





Unlike carbon emissions, which essentially boils down to a target number, water access and consumption differs in every location – a litre of water from one geographical source isn't equivalent to a litre of water from another. However, water dependency is measurable. Companies disclosing to CDP report at a facility and basin level on water quality and quantity and the degree to which their local sources are stressed. Importantly, these disclosures also factor in the availability of quality water for local communities and the provision for sanitation and health. Tesco, for example, uses the World Wide Fund for Nature (WWF) Water Risk Filter to explore, assess and respond to localised supply chain water risks. Resource sharing and groundwater depletion and pollution is a significant issue for businesses: Coca-Cola lost its licence to operate its Plachimada factory in Kerala, India, in the early 2000s after local wells ran dry and villagers nearby reported increased levels of water pollution.

For investors, it is important to establish which companies are setting targets to reduce water-related risks and futureproof their businesses. In 2023, only 4% of companies disclosing to CDP reported water-related targets for their supply chains, which needs to improve. Multinational brands Burberry, Capri Holdings, Levi Strauss and Kering are setting targets supported by initiatives like the fashion industry's Roadmap to Zero Programme. Luxury goods brand LVMH has committed to a 30% reduction in water withdrawal by 2030. These targets and commitments are important for key activities such as vineyard irrigation, cotton cultivation, leather and wool production, and precious metal extraction and processing. Global brands are also starting to incentivise action on supply chain water management by tying it to executive pay – 14% of companies reporting to CDP highlighted board-level incentives.

Target setting and supply chain engagement must be mindful of suppliers' capacity to respond and adapt. Demands on suppliers for access to markets must be balanced by access to support from leading companies considering water risks. Companies like AstraZeneca, Burberry and Johnson & Johnson are among those integrating water into supply chain codes of conduct and compliance measures. In Vietnam, Nestlé worked with the Swiss Agency for Development and Cooperation to train 50,000 farmers in sustainable irrigation, saving the country 50m cubic metres of water annually and generating over \$8 million for smallholder coffee farmers.

Banks have also started to offer sustainability-linked financing for suppliers meeting certain Key Performance Indicators (KPIs) in their CDP disclosures. With the cost of capital for businesses escalating, CDP are working with banks to link more KPIs to water-related disclosures for suppliers to prioritise water risks going forward.

40%

of companies (1,281/3,163) assess risk in their supply chain.

Companies that include their supply chain in their risk assessments are seven times more likely to report water-related supply chains (risk), and therefore more likely to put in place proactive measures to mitigate them.

In 2023, only

4%

(131) of companies disclosing to CDP were setting global water-related targets for their supply chain.

Stewardship at the Source report
CDP, March 2024

Martin Gisbourne

Chief Strategy and Sustainability Officer Genuit Group plc

Martin joined the Group in September 2019 as Group Strategy & Marketing Director. After a functional background in a variety of commercial and marketing roles with brands such as Bosch and Geberit, Martin has over twenty years' experience of leading businesses in the construction products sector, most recently as part of the Belgian Aliaxis group where he was responsible for businesses in the UK, Middle East, South Africa and Nordic markets. Martin was appointed as Chief Strategy and Sustainability Officer in April 2023. He has a BSc in Financial Management from Loughborough University.



Genuit Group focuses on pressures facing the built environment, working to reduce its impacts on climate change and increase its resilience to weather extremes. Genuit's water management solutions business concentrates on how to sustainably save and reuse water and how to mitigate and control inundations to limit the supply stress on infrastructure and drainage systems. In relieving that stress, the Group looks to maximise value from the water it captures and redistributes – strategy, sustainability and revenue growth are inextricably linked.

Water management is being made increasingly difficult by a paradox created by more severe and frequent patterns of rainwater dispersal. Short, intense bursts of rainfall causing flooding in some areas don't adequately replenish water stocks in others where rising temperatures increase evaporation and exacerbate drought conditions – temperate countries like the UK often see severe flooding and water scarcity occurring in series. Water scarcity heavily impacts agriculture and quickly becomes problematic for households and industries. Many countries have water management systems that weren't designed for the stresses created by modern weather extremes.

Warmer skies hold more water which is a significant problem for built environments contributing to increased heat levels. Rural environments are generally cooler and better equipped to mitigate heavy rainfalls and filter and clean the water they absorb. Urban environments with impervious surfaces have fewer natural defences to protect water management systems from overwhelming rainfall events. Contaminants from the built environment pour into drainage systems and many subsequently work their way into rivers thereby polluting our water courses.

Understanding more about the effects of climate change on built environments has helped to shape a regulatory framework. The UK's Floods and Water Management Act has been in force since 2010, though implementation across UK jurisdictions has been painfully slow. Schedule 3 which gives ministers responsibility to publish national standards for sustainable drainage was only adopted by Wales in 2019 – adoption in England is expected in the near future. Regulation may also be needed to support behavioural change regarding water consumption. Average domestic use currently runs at around 140 litres per person, per day – ideally, we need to reduce that daily consumption rate below 100 litres. Behavioural change is one route, but we need to invest more in infrastructural innovation and interact with utility providers to design homes that require less water to build and maintain.

“At Genuit Group we are focused on creating a more sustainable built environment. This means increasing its resilience as it adapts to the challenges that climate change creates, alongside reducing the impact that the built environment has upon climate change.”

Regulatory changes over the last 20 years have affected infrastructural development and the built environment and Genuit's products and solutions have evolved to support customers with changing compliance, increase their water management resilience, and respond to broader sustainability ambitions. One of the first major regulatory changes involved the hierarchy of water drainage. Before 2002, water was piped away from urban developments into rivers or other water courses as quickly as possible. The 2002 change in hierarchy looked to firstly reuse rainwater using harvesting tanks or systems so it did not need to go into the drains. If this did not manage the problem, then the next option was to let water soak into the ground – water that goes into the ground does not go into the drains, so protects from flooding whilst recharging aquifers. If harvesting or soaking away is not sufficient, then storage ponds or underground storage tanks can be built with controls to monitor the rate at which water flows out of them into the drains to manage their capacity, and to control the rate of discharge into rivers. Once design has progressed through these three levels then water can be discharged through pipes. Genuit's growth in water management solutions derived in part from new markets for harvesting, storing and reusing water in the built environment, driven by changes to regulations, design codes and planning policies which protect the built environment from the consequences of climate change, for example flooding.

Resilience is increasingly being designed into new drainage systems. When Genuit began working on water management solutions, it was typical to design for a one in 100-year flood event. The increased frequency of inundations now means that Genuit designs in an additional 40% allowance for climate change. Water management infrastructure has expanded consequently, and the market has grown.

Jason Shingleton

Group Materials Science and Innovation Director Genuit Group plc

Jason holds a degree in chemistry and a PhD in polymer chemistry from Loughborough University and has over 26 years' experience of product and materials innovation. Jason has spent most of his career developing products which either address the consequences of climate change or some of its causes, focusing on how Genuit can make the built environment more resilient and more circular. During his 15 year tenure as Marketing and Development Director in Genuit's Civils and Green Urbanisation business, he led a team of engineers in innovating sustainable stormwater management solutions to tackle the challenge of increasingly excessive surface water runoff caused by changing weather patterns and urbanisation.





Climate Management Solutions (CMS)



Water Management Solutions (WMS)



Sustainable Building Solutions (SBS)

Pollution management is also driving innovation. Combined sewer systems – especially in areas like London – were not designed for the capacity they are expected to manage today. Excess rainwater flushes out wastewater pollutants leading to river spill, contaminated watercourses and vulnerable stocks of potable water. Construction of the new Thames Tideway Tunnel ended in March – once operational, it is expected to capture, store and convey for treatment all the sewage and rainwater that currently flows into the Tideway estuary. Captured rainwater is being considered as a supporting source for flushing toilets, and national clean water grids have been discussed to address the issue of temporary regional scarcity.

Genuit supported Thames Water’s Greenstreets stormwater management project in London, extracting surface water from residential combined sewer systems to free up capacity and prevent flooding. The successful retrofitting of under-road systems is helping to mitigate the potential cost of large-scale infrastructural redevelopment. Elsewhere, Genuit’s Polystorm modular water storage system helps to control the flow of water discharge via soakaway or impermeable storage-and-release options. Its versatility and easy deployment makes Polystorm a popular management system for housing developments. Large-diameter pipe systems like the Group’s Ridgistorm-XL protect water management infrastructure and prevent the release of contaminants into watercourses.

Genuit’s innovative Permavoid system works to improve urban environments by supporting the growth and health of natural water defences. Water stored underground transfers to soil, irrigating trees and plants. Trees provide shade, cooling urban areas. Plants help to control the hydrological cycle, reducing the strain on water management services. At Walthamstow Stadium, Permavoid has prevented excessive water runoff into the River Lea. An asphalt and concrete bus depot at Orlyplein, Amsterdam, has been transformed by underground irrigation into a sustainable green space and urban park.

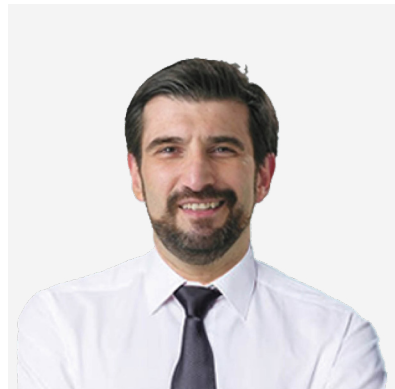
Looking ahead, Polysync offers a smarter, scalable response to domestic drainage solutions. From water harvesting to responsive weather forecasting, Polysync optimises the storage and release of heavy rainfall, maximising reuse potential and managing systems capacity ahead of extreme weather events. Supported by adaptive AI, Polysync is a potential gamechanger for the future control and management of water in the built environment.



Professor Nick Voulvoulis

Professor of Environmental Technology and Deputy Director of the Centre of Environmental Policy
Imperial College London

Nick is an international expert in environmental management and sustainability, especially where science and engineering interface with public policy. Trained as an environmental scientist, his research focuses on the interactions and interdependencies between human and natural systems, through several projects funded by research councils, international bodies and commercial and charitable organisations. Current research activities are exploring the potential of systems approaches for reaching net zero, and tools and policies for the sustainability transformation of urban water systems. He is the principal investigator of the Natural Environment Research Council (NERC) funded project Defining the antimicrobial resistance (AMR) Burden of Antimicrobial Manufacturing Waste, as well as leading a research programme funded by the United Nations (UN) Food and Agriculture Organization (FAO) on Global Resources Fragility and Vulnerability to Droughts. He also co-leads Imperial's contribution to the Global Hydrogen Production Technologies Centre funded by the US National Science Foundation (NSF) and non-departmental public body UK Research and Innovation (UKRI). In the UK, ongoing work on the risks associated with combined sewer overflows has attracted some public interest, helping the water industry demonstrate the need for capital investment in infrastructure that is often taken for granted but is critical to our future prosperity.



What we often refer to as the global water crisis is more accurately two conflated crises: the physical scarcity of water in certain populated regions of the world, and the shortage of safe drinking water due to poverty or a lack of supporting infrastructure. Water availability really refers to renewable internal freshwater resources derived from precipitation flowing into and replenishing natural aquifers. Since 1960, those freshwater resources per capita have been in a state of decline. Many countries suffering the effects of both crises face increasing water deficits – large areas of the Global South still face major challenges accessing localised drinking water.

Household water requirements represent less than 10% of global water use, but there are significant inequalities in household access to clean water and sanitation. The underlying causes of these inequalities and general water scarcity are less to do with supply-related issues and more rooted in institutional and political choices. Groundwater is overexploited, surface water is increasingly polluted, and rainfall isn't collected at scale. Too much water is being exploited and not enough is being done to secure supply. Overconsumption and the decline in water quality generates increased risk for energy security, food security and public health. Household water use per person in the UK is relatively high, but the rate of water loss through infrastructural failings is even higher – around 3 billion litres a day are lost to system leaks. Indirectly, the UK consumes around 30 times its daily rate through the water used in energy production and imported food and textiles – only 38% of the UK's water use derives from domestic sources.

Intensive food production exerts significant pressure on freshwater supplies. Almeria in Spain has become Europe's vegetable garden, producing around 3.5 million tonnes of fruit and vegetables annually in a network of greenhouses covering 40,000 hectares. Overexploitation of the natural aquifers resulted in the construction of four desalination plants. Ironically, the expense of water extraction via desalination prompted a rethink of production methods in Almeria which contributed to improvements in the overall level of water efficiency.

“Water crises in many parts of the world are holding back human progress, consigning people to lives of poverty, vulnerability and insecurity.”



However, we don't have to run out of water to improve efficiency. The linear water cycle, from 'raw' untreated water through to use and effluent discharge, is expensive. Raw water quality is often worse than effluent discharge and the costs of drinking water and wastewater treatments are high. It makes sense to integrate solutions, reuse water, and close the loop.

Berliner Wasserbetriebe supplies Berlin with drinking water and treats its wastewater. Because annual precipitation over the city is not enough to replenish aquifers, Berliner Wasserbetriebe uses 248,000 cubic metres of treated wastewater to recharge surface water stocks. These filter into aquifers through artificial conduits to form groundwater which is then abstracted to supply 3.4 million Berliners with naturally filtered unchlorinated drinking water.

Despite the enduring myth of the English weather, London experiences even less annual rainfall than Berlin. The UK's first desalination plant was opened by Thames Water in Beckton in 2010 in response to a demand from Ofwat to supplement London's water supply. At that time, desalination was a cheaper option for Thames Water to increase supply as they were losing over 500 million litres of water a day through network leaks. Energy for the plant was supplied by CHIP, a start-up provider generating energy from wind technology and the fat extracted from London's sewers.

Since its construction, however, the plant has only been used three times owing to high operating costs. Thames Water's leak rate has also significantly increased along with costs associated with system repairs and regulator fines. Desalination in a linear water cycle is more of a problem than an answer: the more clean water it produces, the more wastewater it generates. In theory, the Beckton plant could close the loop by purifying treated wastewater to a level acceptable for circulation into the potable water network.

Purification is an important consideration for closed-loop solutions. Cities around the world often abstract water from sources downstream from wastewater discharge points. The Thames is no exception and significant volumes of wastewater and effluent enter the river or its tributaries upstream from London's water sources. The EU's Drinking Water Quality Directive established strict standards for water intended for human consumption, although the inclusion of 'acceptable' trace levels of toxins and pesticides did not help to increase public trust. Recycled wastewater for drinking must also overcome public scepticism, even though it is cleaner than regular drinking water after treatment - water should be judged by its quality, not its history.

The increase in sewage spills and stories highlighting the unregulated discharge of effluent into domestic waterways points to aging infrastructure and an overall lack of capacity. Climate change further complicates matters, but the issue really boils down to a lack of investment. The water sector is highly regulated and expensive to maintain and upgrade. Ofwat has a difficult job balancing infrastructural needs with consumer interests and affordability - when prices are kept low, asset renewal is often postponed. The UK is not alone in trying to support a struggling water system. The American Water Works Association estimates that a \$298 billion capital investment is needed just to raise the country's wastewater systems to acceptable levels - upgrading US drinking water infrastructure will require another \$1 trillion.

Because much of our water infrastructure is out of sight, we rarely think about its integrity until something goes wrong. We need to recognise its importance because it manages, controls and circulates a valuable commodity. Environmental regulations are important for pointing water companies in the right direction, but the industry must do more to deliver the benefits and sustainable solutions that policies aim to introduce, not just work to the minimum.

Water infrastructure enables prosperity. Water must be resilient to the conditions we face today and the changes we expect in the future, and access to it must be equitable and affordable.

Kai Johns

Senior Ethical, Sustainable and Impact Researcher Greenbank

Kai conducts analysis of investments against a range of environmental, social and governance criteria for both new ideas and companies in Greenbank’s investment universe. He uses a range of data sources and integrates them into the Greenbank research process. Kai’s focus is on climate impact and risk assessment across the investment portfolios Greenbank manages and his areas of interest include climate solutions, net zero and smart cities. Kai joined the ethical, sustainable and impact research team in March 2019 after graduating from the University of Cambridge with a BA in Law.



Water pressures underpin a range of sustainability issues, and a systems-thinking approach is key to addressing them. The Stockholm Resilience Centre developed a research-based framework in 2009 which established nine planetary boundaries within which humanity could continue to develop and thrive. These boundaries represent the overall stability and resilience of the planet’s supporting systems. To date, humanity has transgressed six of those nine boundaries, putting the world at risk of irreversible change. Updated research by the Centre in 2023 confirmed that the freshwater boundary was the latest threshold to be crossed.

Global pressures on water provision are exacerbated by a variety of factors. Rising populations contribute to increased demand – particularly through a growing middle class – and associated urban expansion magnifies consumption and inefficiencies. Climate change disrupts the hydrological cycle and increased water pollution contributes to the depletion of clean water supplies. In 2005, the World Economic Forum estimated that the 3% global water supply gap they calculated that year would increase to 40% by 2030. A revision of that estimate last year showed no change in the forecast.

Investors can help to narrow that supply gap through direct investments in utility providers, innovative infrastructure, and developing water technologies. Tech companies present a particularly interesting case as the benefits of their work can be far-reaching: their products can help customers save costs in expensive markets, those products can benefit the environment, and the companies themselves can profit and expand their product range.

Developed by US water tech company Xylem, Xylem Vue is an integrated software and analytics platform that enables utility providers to see a complete picture of their operational status and network efficiency in real time. Performance monitoring allows providers to conduct predictive maintenance and quickly identify and address supply issues. Xylem’s Sensus MeiStreamRF is a durable commercial and industrial water meter with an in-built alarm for supply or network stresses and integrated communication for remote usage data – no more hunting for that elusive meter. In the UK, Halma plc have developed environmental analysis technologies that detect leaks and blockages in water and wastewater networks, helping to conserve fresh water and keep the environment pollution-free. Halma’s solutions monitor and protect over 150,000km of water pipes internationally, helping to improve a global management system that loses around a fifth of the world’s water through leaky infrastructure.




Looking further into the future, desalination has been talked about widely as a possible means to increase global freshwater supply. A problem with this solution at scale is how to deal with the excess salt which would be extremely detrimental to marine biodiversity if it was simply returned to the sea. With a circular economy mindset, one possible solution could be to use those salt deposits to support the global production of lithium. Elsewhere, atmospheric water generators (AWGs) extract moisture from the air using cooling technologies that condense water vapour and convert it into potable water. AWGs are viable solutions for areas of the world affected by water scarcity or contamination, although they can be energy intensive. Drought-resilient crops are also being developed, reducing agricultural pressures on freshwater supplies.

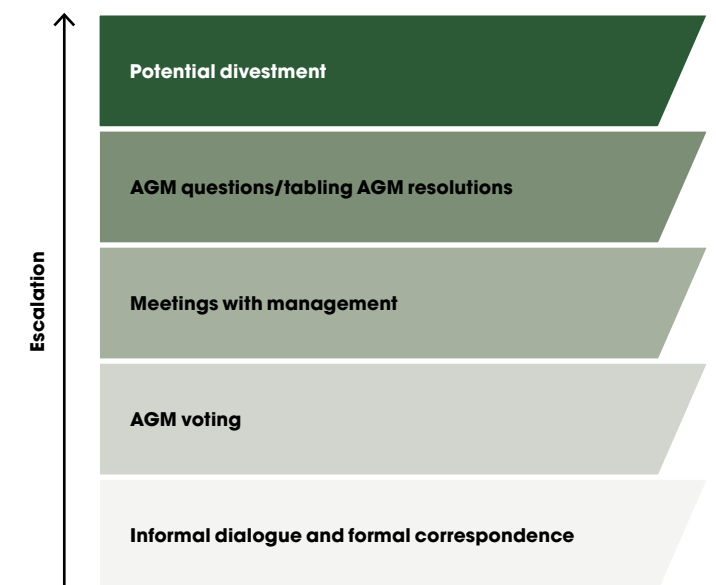
Business productivity relies heavily on water and supply shortages threaten significant economic consequences. Sustainable water research by management consultants Roland Berger concluded that water scarcity had as negative an effect on GDP growth as oil supply disruption. While agriculture suffers these effects most acutely, petrochemicals, pharmaceuticals, textiles, paper and pulp, and high-tech industries are all facing mounting water-related operational and cost challenges. Without alternative water source adaptation and large-scale behavioural change, Roland Berger estimates that some economic regions could start seeing cuts of up to 6% in their GDP by 2025.

Economies are also reliant on technologies and the semiconductors that power them require large amounts of water to produce. The increasing size and power of datacentres underpinning economic activity puts additional stress on the water sources used to cool them. Heating and ventilation management companies like Belimo are developing valve technologies to control the flow of water through datacentre cooling systems, reducing consumption and improving efficiencies. Alongside targeted investment, Greenbank aims to improve the future of water provision through an active programme of engagement. Our three priority themes for this year all have water quality and consumption in mind: nature, climate, and health. Under our nature theme, research into the drivers of biodiversity loss and guidance on freshwater stewardship from the Science Based Targets Network indicates the scale of impact multiple industries have on water supplies and quality and how much that impact is a conduit for accelerated biodiversity loss.

In the world of fast fashion, for example, it can take 2,700 litres of water to produce a single cotton t-shirt – as much as an individual drinks in two-and-a-half years. The industry also consumes around 5 trillion litres of water annually for fabric dyeing alone. Coats Group plc, the world’s largest thread and clothing components manufacturer, is investing in water-free dyeing technologies, reducing water consumption in production methods, and improving resource efficiencies through increased water recycling. The Group’s new Ecoline insole solution is made with 85% recycled material and produced by a fusion-bonding technology that doesn’t require chemicals or water. Water is a precious commodity, and we look to prioritise companies who value it as such.

Priority engagements for 2024

	Health and wellbeing	Health Investor Coalition on Food Policy, Consumer health, Worker health, Access to medicine, Air pollution
	Habitats and ecosystems	Nature Biodiversity, World Heritage Sites, Water
	Energy and climate	Climate A just transition to net zero



Q&A

Q How does Greenbank assess and engage with the water industry?

KJ It is true that water companies and regulators have a difficult job balancing costs and infrastructural needs. We do however make a point of assessing the goals that make for a resilient water industry: affordability, supply security, and sustainability. Serious incidences of pollution are a key part of our negative screening approach and performance reports by the Environment Agency clearly state who the repeat offenders are. One option is to engage with water companies – we have previously met with the CEO of Severn Trent and engaged with United Utilities on broader biodiversity impacts. However, our preferred option is to invest in technologies contributing to a more resilient system.

Q Isn't climate change and the threats associated with it the biggest future concern for water industries?

NV Looking at the diverse range of challenges presented by climate change, there is perhaps a risk of focusing on symptoms rather than root causes. Sewage overflows, excess effluent and insufficient rainfall collection are all down to failures in infrastructure and policy. If we think more strategically about how we address those systemic failures and close the loop on our management of wastewater, we may be better prepared for evolving water risks.

CE There is no global constant impacting water supply and quality – it is very much a local risk. Investigating localised water risks across supply chains helps us better understand the wider impacts of corporations and the nature- and climate-related risk exposures of financial institutions. We focus on the general risks of climate change, but we don't yet know how resilient central banks are to climate shocks. We also need improved data to assess climate risks in connected markets – how do water shortages in a regional market impact local producers and services providers, and how far up the value chain are those impacts felt?

MG Climate change is highly significant in a global sense, but industry actors need to focus their expertise on regional issues. Genuit concentrates on local interactions between stormwater and sewerage to mitigate discharges and overflows and improve an important part of systemic resilience.

Q Some water management solutions require significant amounts of plastic. Are we exacerbating one sustainability risk to fix another?

MG & JS We must innovate to improve matters, but we do it in the most sustainable way. Many Genuit products are polymer based, but we are the largest processor of recyclable polymers in our European peer group. In 2022, Genuit collected and processed more tonnes of recycled polymer than Wales, converting it into replacement pipes with a design life of over 100 years. We're generating plastic from circular production, designing in a long period of utility, and creating systems to recover and reuse materials when they eventually need replacing.

KJ It is important to consider the broader impacts of actions on sustainability issues and water is no exception. For example, desalination increases stocks of water for human consumption and irrigation, but excess salt disposal presents an environmental problem, and the process is very energy intensive. Potential solutions must consider a wide range of efficiencies to calculate the risks of unintended consequences.

Q If the water lost to leaks eventually finds its way back into the ground, are network leaks really such a problem?

NV Remember that these leaks occur after water is treated and that treatment for human consumption requires a considerable amount of energy and operational cost. Energy consumption also increases emissions – if we are losing half our treated water before it reaches households and industries, we are wasting the water and the energy used to produce it and increasing the industry's carbon footprint. Leaked water may well be returning to its source, but the costs, waste levels and increased pressure on resources make it a weak argument for postponing infrastructural investment.

Q Should we be using so much water in the production of food with poor nutritional value?

KJ About 70% of global freshwater demand is absorbed by the food system, so it does seem like there is an associated impact on public health where freshwater is used to produce unhealthy foods. We could therefore argue that we are using too much of a vital resource to produce food we don't need. Food and health are also priority engagements for Greenbank, and we have been especially active on domestic policy mechanisms. We can lobby for improvements with individual food producers, but policy change promotes systemic change, either through subsidies for more sustainable activities or via regulatory measures to enforce sector-wide compliance.

NV In systems thinking, we talk about leverage points: where small changes have big systemic impacts. In the case of food, for example, we could factor in the cost of water in food pricing to develop a system that better reflects the real costs of production. That might be a small business change, but it could have a significant impact on the future management and valuation of resources.

Q What is it about this issue that gives you cause for optimism?

MG Within the water industry, I feel that the penny has dropped. Water companies want to reduce water loss and improve production efficiencies, but they are also looking more holistically at what we can do to protect our infrastructure rather than increase pressure on it. An example of one of these holistic solutions is the redevelopment of the bus depot in Amsterdam into a multi functional green space where water is stored and reused, which helps to prevent flooding but also helps the plants grow and biodiversity to thrive.

JS It may not be happening quickly or at scale, but we are seeing more regulation aimed at driving improvements. The Clean Water Act in the US has led the way, focusing on removing pollutants from wastewater prior to discharge. New drainage system designs for the built environment also indicate an increasing recognition among planners and designers that change is needed.

CE When I joined CDP five years ago, it was difficult to engage with anyone on the issues facing water. Now we have public interest, we have central banks and regulators talking about it, and we even have government action and investment. We may be a long way from solving all water's problems, but we have plenty of stakeholder support to keep it a priority.

KJ Hosting this event at the Institution of Engineering and Technology, I'm reminded of our capacity for innovation and systemic thinking in the face of significant global challenges. The research and development work of Genuit and companies like them gives me hope that while global water provision and management might continue to pose problems, those problems won't be ignored.

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